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## SMD Operations Procedures Manual

### 3.0 LOCAL EMERGENCY PLAN FOR THE SUPERCONDUCTING MAGNET DIVISION

Text Pages 1 through 12  
Attachment 1

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### **3.0 Local Emergency Plan for the Superconducting Magnet Division**

#### **1.0 Purpose and Scope**

The Local Emergency Plan for the Superconducting Magnet Division (LEP-SMD) is intended to provide general guidance for responding to most incidents at SMD facilities. The Local Emergency Plan supplements the Laboratory Emergency Plan and takes into account the special conditions that exist in some facilities. In addition, the Local Emergency Plan describes Laboratory wide emergency signals and the reactions required by SMD personnel. The various activities are mostly concentrated over one area of the BNL site, namely the Building 902/905 complex. However, some division work is performed at Building 924. Therefore, Local Emergency Coordinators are named for various major facilities of the Division and several assembly areas are named instead of one centralized location.

##### **1.1 Description of Facility**

SMD performs design, production and testing of various superconducting magnets for BNL and other users. The majority of the administration design work is performed in Buildings 902A, B and C, along with the upper floor of Building 903. Manufacturing processes are performed in Buildings 902, 905 and 924 (some machine shop work in the lower level of Building 903 on an as needed basis). Magnet testing is performed in Building 902 MAGCOOL facility, Vertical Test and Short Sample Test Facility and Building 902Annex. Buildings 943, 944 and 948 are support buildings for magnet testing. Building 899 and 904 are primarily for storage.

There is a potential for an emergency during SMD manufacturing and testing operations due to (but not limited to) the presence of liquid cryogen (nitrogen and helium), flammable gases, pressurized vessels, extensive electrical power and inadvertent releases to the environment (i.e., compressor lubricant leaks).

## 1.2 Hazards

Specific incidents at the division for which implementation of this Plan might be required are:

### 1.2.1 Facility

- Fires
- Explosions
- Industrial accidents
- Personnel injury
- Uncontrolled release of hazardous or toxic material
- Oil/chemical or other hazardous material spills
- Release of explosive or flammable liquid or gas
- Electrical fault
- Actual or threatened rupture of a pressurized vessel
- Others; as determined by the ES&H Coordinator.

### 1.2.2 Natural Phenomena

- Earthquake
- Hurricane, tornado or other wind storm
- Snow or ice storm

### 1.2.3 Terrorist Threats or Acts

- Conventional Bomb Threat
- Overt or covert action, including sabotage

## 2.0 Authority and Responsibilities

### 2.1 Laboratory Emergency Supervisor (LES)

Upon activation of the Laboratory Emergency Plan, the LES shall be the BNL manager responsible for overall direction of response to the emergency at the scene. Decisions made by the LES shall be based upon information and advice provided by the Departmental Emergency Coordinator (DEC), the Local Emergency Coordinator (LEC), and other knowledgeable persons present at the scene.

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## **2.2     Department Emergency Coordinator (DEC)**

Upon arrival at the incident scene, the DEC shall report to the LES. The DEC will assist the LES in the identification of potential hazards and controls present at the incident scene. See section 5.13 for specific DEC duties and procedures.

## **2.3     Local Emergency Coordinator (LEC)**

Local Emergency Coordinators are assigned to provide expertise in the immediate area of the incident. The LEC is charged with the responsibility of protecting all personnel, facilities, and equipment in the area for which they are designated, and, when possible, for accounting for all personnel in the area at the time of the incident.

The LEC is also responsible for training new employees in the local hazards and emergency response actions. The LEC shall maintain Emergency Notification Placecards (at entrances to building, laboratories and building areas with specific hazards) and providing updated information to Emergency Services (Emergency Run Cards). See section 5.14 for specific LEC duties during an emergency situation, procedures. A list of LEC assignments for SMD can be found on the division's web site [Contact List](#).

## **2.4     Facility Support (FS) Personnel**

Upon notification by the DEC or LEC, the on-duty FS will report to the Control Point and wait for further instructions. The on-duty FS responsible for advising the LES/DEC/LEC of the health conditions in the affected area and to assist emergency response personnel in controlling their exposure to hazardous chemicals, radiation, etc.

## **2.5     All Other Personnel**

Place equipment into a safe or stable condition and evacuate the area to the assembly point when directed. They shall inform the LEC, DEC or LES immediately if a hazardous situation is present or if any personnel are known to be missing/unaccounted for..

## **3.0     Prerequisites**

None

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#### **4.0    Precautions**

The safety of personnel is of primary importance. Care should be taken not to give instructions to personnel that might place them in the way of physical harm.

#### **5.0    Procedures**

##### **5.1    Notifications**

###### **5.1.1    Emergency Call-Down List**

When informed of an incident, Security personnel shall implement the emergency call-down list. The list is part of the Contact List and is posted on the division's web site. The individuals on the emergency call-down list have been selected as those persons having a general knowledge of the organization and activities in their areas. They will, in turn, inform the DEC of the incident, and contact Division administrative personnel regarding serious injuries or incidents. They may also contact various group leaders or individuals regarding emergencies involving specific areas, apparatus or personnel. Attachment 1 has a recommend order of notification after an initial notification to the division has been received.

##### **5.2    Emergency Signals**

###### **5.2.1    Laboratory Emergency Signals**

###### **5.2.1.1 Alert Site Signal**

The site-warning signal is the continuous sounding of the site sirens for five minutes. Upon hearing this signal, all personnel except those having emergency response assignments should proceed to the Assembly Areas designated in Attachment 1 and await further instructions.

###### **5.2.1.2    Site Evacuation**

The site evacuation signal is the intermittent sounding of site sirens for a period of five minutes. Upon hearing this signal, all personnel except those having a site wide emergency response function should leave the Laboratory.

###### **5.2.1.3 Plectrons**

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Radio controlled Plectrons (electronic alerting devices) are strategically located in SMD buildings and throughout the Laboratory. They can be activated regionally or sitewide to deliver warnings or evacuation messages, or to notify the Division of an emergency. The Plectrons in the SMD complex will be brought to the Assembly Areas when these locations are activated. SMD Plectron locations are listed on division's web site on the Contact List.

#### 5.2.2 Fire Alarms

The fire alarm signal is a continuously ringing of bells. On hearing the alarm, personnel shall place their equipment into as stable of a state as practical and **evacuate** the area **immediately**.

A fire may be reported by either pulling a manual fire alarm box, by calling the emergency number, Ext. 2222 or calling 911 (**Note, if using a cell phone, one must dial 1-631-344-2222**). Either action will result in the response of the Fire/Rescue Group. However, pulling the manual fire alarm box is the preferred notification method since this will also result in the alarm location being displayed in the Fire Station and activates the local fire alarm bells.

Fire alarms may also be activated by automatic detection devices located throughout SMD areas.

#### 5.2.3 Medical or Other Non-Fire Emergency

Medical, rescue or other emergency aid can also be summoned by phoning Ext. 2222 or pulling a fire alarm manual box (see 5.2.2). A phone call is the preferred means because specific information regarding the nature of the emergency can be provided and an ambulance or other appropriate vehicle will be the first to respond instead of fire apparatus.

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### 5.3 Communications

#### 5.3.1 Public Address System

Only personnel in Buildings 902, 902A, 902B, 902C, 903, 905 and 943 can be contacted by a public address system. Announcements can be made from the SMD Office (Room 45; Ext. 5123, 7108) in Building 902A.

#### 5.3.2 Radio Communications

Emergency Personnel will be the primary users of Radio Communications. SMD personnel will not normally use radio communications.

#### 5.3.3 Commercial Telephone Service

Commercial telephone service is available throughout the Division and the Laboratory. Key Division telephone numbers can be found on the division's web site Contact List. The telephone number to report an emergency to Security and Fire/Rescue is 2222.

The Police Captain and Fire/Rescue Captain vehicles each carry a mobile telephone. They can be made available for use by the LES, DEC or others when necessary. To phone a BNL extension, the area code (516) and seven digit number must be called (344-\_\_\_\_).

#### 5.3.4 Pager System - For Individual Notification

Two types of pagers are available through the BNL commercial telephone system. To access the system, dial 3456, wait for the tone and dial the pager access number. For voice pagers (first number 0-3), speak your message after the tone. The message should be given at least twice. For digital pagers (first number 4-9) enter your callback number after the tone (up to 10 digits).

### 5.4 Hold Points

5.4.1 Hold Points are designated locations that responding BNL emergency forces will report to, and not proceed beyond, without Division approval due to special hazards (high radiation, explosive gases, etc.). There are no permanent Hold Points for SMD at this time. If a special condition exists, the ES&H Coordinator will designate a Hold Point and keep the Police and Fire/Rescue Groups aware of the status in writing of the special hazard and when the Hold Point is in effect.

### 5.5 Control Point

The Control Point shall be a safe location near the incident scene for the assembly of responding local emergency forces, advisory personnel, hazardous equipment operators, etc. The Control Point will be designated by the DEC or LEC and shall be an area not likely to be directly affected by the incident.

The Fire Command car may be used as the Control Point. The Command Car is equipped with radios, telephones, building maps, and other emergency equipment.

### 5.6 Assembly Areas

Attachment 1 lists the defined Assembly Areas for personnel in the various buildings that are part of the SMD Complex.

### 5.7 Personnel Accountability

When at the Assembly Areas, all supervisors shall account, as best possible, for the personnel in their groups. The evacuated area should be checked to ensure that all personnel have responded to the evacuation signals. Results should be reported to the LEC. Certain normally unoccupied areas, or areas where the fire alarms or PA system may not be heard, require building sweeps to ensure total evacuation. The need to perform a sweep and assignment of individuals to perform the sweep will be determined by the LES, with guidance from the DEC and LEC.

### 5.8 Re-Entry

When the LES and DEC determine that the incident/emergency no longer poses a threat to life or property, the LES shall declare the emergency terminated. At this time, the emergency forces may withdraw and evacuated personnel shall be allowed to return into the area at the discretion of the DEC.

### 5.9 Emergency Equipment

#### 5.9.1 Spill Control Supplies

Spill control supplies are available in yellow wall cabinets in Buildings 902 (Compressor areas) 905, and 924. They are also available from BNL stock. These supplies include drain covers and absorbent "pillows" and mats. They can be used to contain a spill until the Fire/Rescue Group responds if the containment action can be accomplished without endangering personnel.

#### 5.9.2 Fire Extinguishers



Fire extinguishers are located throughout the SMD Facility.

#### 5.10 Training

This Plan depends upon proper orientation, training programs, and drills for the Division staff. This applies particularly to those people who may be called upon to accept major responsibilities during an emergency as described in the Plan. The SMD Training Coordinator shall be responsible to ensure that staff are linked to the appropriate training requirements.

#### 5.11 Drills and Exercises

The Division shall support and participate in (as necessary or required) laboratory level drills and exercises (this includes false alarm situations). Critiques shall be performed between the LECs and DEC after a drill, exercise or false alarm. These critiques can be informal in nature. If any deficiencies are noted and action items assigned, then an assessment will be generated using the division's internal tracking system.

Corrective actions that are developed from the evaluations of emergency drills and exercises shall be documented and appropriate changes shall be made to emergency plans and procedures to correct identified deficiencies. A copy of these evaluations shall be forwarded to the BNL Emergency Planning Coordinator. SMD copies shall be maintained by the SMD DEC and distributed to appropriate personnel.

#### 5.12 Review

This Plan shall be reviewed after an occurrence of an accident or emergency situation (or required by SMD procedures) by the SMD DEC (or designate) and any other persons that he/she may designate.

#### 5.13 Department Emergency Coordinator (DEC) Responsibilities and Procedures

5.13.1 Identify the location of the emergency.

5.13.2 Assess the situation and determine where to establish a Control Point (CP) if appropriate for the type emergency.

5.13.3 Verify, if possible, that an announcement to clear radio frequencies of all unnecessary transmissions has been made.

5.13.4 Identify yourself as "Dee Eee Cee", not "Dec", in all radio communications.

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5.13.5 Establish communications with the Local Emergency Coordinator (LEC) and ascertain available information regarding the emergency.

5.13.5.1 If communications cannot be established or the LEC cannot be located, the DEC will also function as the on-site LEC.

5.13.6 If you determine that the situation is best coordinated from a CP, inform the LEC of its location (i.e. "the Fire Command Car").

5.13.6.1 Identify yourself on arrival at the CP to the senior Fire/Rescue officer and other emergency personnel.

5.13.7 Maintain the emergency scene clear of all non-essential personnel.

5.13.8 Ensure that the complex is maintained in a status commensurate with the type and location of the emergency.

5.13.8.1 Verify that the Emergency Call-Down List and any other appropriate notifications have been initiated.

5.13.8.2 Maintain communications with the LEC and the BNL Emergency Forces. Restrict radio traffic to pertinent transmissions.

5.13.8.3 Allow only authorized personnel, with appropriate personal protective equipment, to enter the hazardous area.

5.13.8.4 Suspend any operations, if necessary, to improve safety for personnel involved in the emergency abatement. This may include suspension of training operations.

5.13.9 At the request of the LES, turn over command and control to the LES and provide assistance.

5.13.9.1 Confer with the LES to determine the appropriate Emergency Response Level (i.e., Unusual Occurrence , Alert, Site Emergency or General Emergency)

5.13.9.2 Identify the LEC to the LES.

5.13.9.3 Inform the LEC that the LES has taken command.

5.13.10 Assist in the preparation of related reports. Determine if the incident is reportable under the Occurrence Reporting and Processing System (ORPS). If it is,

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ensure proper initial notification is made. The contact number for ORPS Categorizer on-call can be found on the directory page of the BNL web site.

#### 5.14 Local Emergency Coordinator (LEC) Responsibilities and Procedures

5.14.1 Identify the nature and location of the emergency.

5.14.2 Activate the fire alarm or phone extension 2222, as appropriate.

5.14.3 Secure equipment to emergency status.

5.14.4 Initiate communications with the DEC and emergency response personnel and advise them on the emergency situation.

5.14.5 Evacuate the area of nonessential personnel.

5.14.6 Establish a Control Point (CP), if appropriate. This should be a location near the incident scene for the assembly of emergency personnel, but sufficiently removed for safety.

5.14.7 Contact personnel with knowledge and skills pertinent to the emergency and assemble them at the Control Point as possible assets.

5.14.8 Assess the situation as thoroughly as possible regarding the nature of the emergency, possibility of containment or control, and related or proximate hazardous or flammable materials. This must not be done at the risk of personal injury.

5.14.9 Verify that the fire alarm is operative (if a fire) and, if possible, contact the Fire/Rescue Group to verify that they have received the alarm.

5.14.10 Respond to the CP and instruct the arriving DEC, LES and BNL emergency personnel of the:

- A. potential hazards to personnel,
- B. nature and magnitude of the emergency, and
- C. associated conditions, such as the existence of flammable, radioactive, or other potentially hazardous materials or conditions at the site of the incident.

5.14.11 Relinquish formal responsibility for directing the control and containment of the emergency situation to the DEC and/or LES on their arrival at the CP.

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5.14.12 Assist and consult with the DEC, LES, S&EP and other BNL emergency staff in duties related to the protection of personnel, control and containment of the emergency, and the preservation of BNL equipment and facilities.

5.14.13 Identify yourself as "Ell Eee Cee", not "Lec", in radio transmissions.

5.14.14 Assist in the preparation of related reports.

## **6.0 Documentation**

None

## **7.0 References**

- 7.1 BNL SBMS area, "[Emergency Preparedness](#)".
- 7.2 BNL SBMS area, "[Occurrence Reporting and Processing System](#)".

## **8.0 Attachments**

- 1. Emergency Notification Call Sequences & Assembly Areas

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## Attachment 1

### Emergency Notification Call Sequences & Assembly Areas

#### Emergency Notification Lists

Initial notifications of an emergency should be made in the order below sequence (From Bldg. 902A Office):

Location	Means of Notification	Actions of Occupants
902A, B, C, 903 upper level, 905	P.A. System	Assemble in 902A lobby
904	Ext. 4084/Site Check	Assemble in 902A
945	Ext. 2192/Site Check	Assemble in 902A
903 Machine Shop	Ext. 2043/Site Check	Assure Notification by Shop Plectron

#### Emergency Assembly Areas

Personnel in Buildings	Assembly Area
902A, B, C, 903, 905, 943, 944, 945	902A lobby (Zone 7)
924	924 Office Area (Zone 9)

The LEC for each building/area will assign the correct number of people to sweep the area in an evacuation.